

CATARACT EXTRACTION APPARATUS AND METHOD
WITH RAPID PULSE PHACO POWER

(A)
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The present application is a continuation-in-part of U.S. 09/949,405 filed September 7, 2001 now U.S. Patent No. 6,733,491.

The present invention generally relates to apparatus and method for extracting cataract tissue and more particularly is directed to combined use of vibrational and laser energy to effect cataract removal.

An eye generally includes an anterior chamber and a posterior chamber separated by a lens contained in a lens capsule. The lens functions to focus incoming light onto a retina disposed on a rear wall of the posterior chamber.

Cataracts cause the lens of an eye to become clouded, which interferes with proper transmission and focusing of light on the retina. A common practice to alleviate this condition is by surgically removing the cataractic lens and replacing it with an artificial intraocular lens.

Early lens removal was effected through manual extraction which required a wound of about 12mm in length. This large opening can result in corneal or sclera tissue damage.

Externally applied laser radiation has been used to soften a cataract lens before manual extraction therefor. See U.S. Patent Nos. 4,825,865, 5,057,098, 5,112,339, 5,139,504 and 5,403,307. Such manual extraction requires large entry wounds as hereinabove noted.